



Aviation Investigation Final Report

Location:	Robbinsville, New Jersey	Accident Number:	NYC03LA085
Date & Time:	April 14, 2003, 15:12 Local	Registration:	N20569
Aircraft:	McCaa Minimax 1500R	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot/builder reported that he was operating his homebuilt airplane on its first flight. While performing a go-around, he noticed a partial loss of power. He was unable to restore full power, and elected to land on a golf course ahead of him. During the approach, the airplane struck a tree, and came to rest inverted. Examination of the engine and fuel system by an inspector from the FAA failed to find the cause of the reported power loss.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A partial loss of power for undetermined reason(s).

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: EMERGENCY LANDING

Findings

2. OBJECT - TREE(S)

Factual Information

On April 14, 2003, at 1512 eastern daylight time, a homebuilt Minimax 1500R, N20569, was substantially damaged during a forced landing at Trenton-Robbinsville Airport, Robbinsville, New Jersey. The certificated private pilot received minor injuries. Visual meteorological conditions prevailed for the personal flight. No flight plan had been filed for the local flight that was conducted under 14 CFR Part 91.

According to the pilot, the accident flight was the first flight of the airplane. He had previously accomplished high speed taxis, with the airplane momentarily becoming airborne in what he described as "crow hopping." The pilot reported that after initial takeoff, he stayed in the traffic pattern for one landing and then climbed to 2,500 feet, and departed the traffic pattern. He accomplished airwork, and checked the low speed flight characteristics of the airplane. The pilot then returned to the traffic pattern at Robbinsville, for takeoff and landing practice. The first two approaches terminated in go-arounds. On the third approach, in the flare, the airplane ballooned, and he added power for another go-around. During the climb, the pilot realized the engine was not developing full power. The engine never quit; however, it was not developing sufficient power to maintain altitude. The pilot was unable to restore full power, and felt that a turn back to the airport would not be successful. He initiated a slight turn to the right to avoid a tree, but the left wing contacted it. The outboard 1/3 of the left wing separated from the airplane. The airplane struck the ground and came to rest inverted.

An inspector from the Federal Aviation Administration (FAA) stated:

"...The fuel system was reconstructed as best we could using the aircraft fuel pump, lines, and filters. No issues were noted. The ignition was examined, spark occurred at engine rotation. Spark plugs were in new condition and clean. The engine rotated freely. Examination of the pistons did not reveal indication of detonation...."

In a telephone interview, the FAA inspector reported that although some contamination was found in the fuel filter, it was insufficient to block the flow of fuel to the engine.

The airplane was equipped with a non-certificated two cylinder, two stroke engine. The owners manual stated the engine was subject to sudden stoppage, and had not received any individual safety or durability testing.

Pilot Information

Certificate:	Student	Age:	53, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	June 22, 2001
Occupational Pilot:	No	Last Flight Review or Equivalent:	February 6, 2002
Flight Time:	125 hours (Total, all aircraft), 53 hours (Pilot In Command, all aircraft), 5 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	McCaa	Registration:	N20569
Model/Series:	Minimax 1500R	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	1035
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	November 30, 2002 Condition	Certified Max Gross Wt.:	640 lbs
Time Since Last Inspection:	5 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2 Hrs at time of accident	Engine Manufacturer:	Rotax
ELT:	Not installed	Engine Model/Series:	DCDI
Registered Owner:	On file	Rated Power:	50 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	TTN,213 ft msl	Distance from Accident Site:	11 Nautical Miles
Observation Time:	16:53 Local	Direction from Accident Site:	305°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	9 knots / 0 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.29 inches Hg	Temperature/Dew Point:	18°C / -1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Robbinsville, NJ (N87)	Type of Flight Plan Filed:	None
Destination:	(N87)	Type of Clearance:	None
Departure Time:	16:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	Trenton-Robbinsville Airport N87	Runway Surface Type:	Asphalt
Airport Elevation:	119 ft msl	Runway Surface Condition:	Dry
Runway Used:	29	IFR Approach:	None
Runway Length/Width:	4275 ft / 80 ft	VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	40.214443,-74.594169

Administrative Information

Investigator In Charge (IIC):	Hancock, Robert
Additional Participating Persons:	James Dornak; Federal Aviation Administration; Philadelphia, PA
Original Publish Date:	February 5, 2004
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=56829

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).